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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,784	03/21/2006	Jochen Wehner	WEHNER1PCT	9555
25889	7590	06/28/2010		
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			EXAMINER LEONARD, MICHAEL L	
			ART UNIT	PAPER NUMBER
			1796	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/572,784	<b>Applicant(s)</b> WEHNER, JOCHEN	
	<b>Examiner</b> MICHAEL LEONARD	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/09/2010</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see Arguments, filed 04/27/2010, with respect to the rejection(s) of claim(s) 2-6 and 6-20 under U.S. Patent No. 6,046,297 to *Rosenberg et al.* in view of U.S Patent No. 5,340,652 to Sondhe et al. and claims 4-5 and 21 under U.S. Patent No. 6,046,297 to *Rosenberg et al.* in view of U.S Patent No. 5,340,652 to Sondhe et al. in view of U.S. Patent No. 3,217,536 to Motsinger et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. The rejection was withdrawn because of the amendment to new claim 22, which included the limitation that the polyol portion (A), must be a mixture of polyols with the desired mols of hydroxyl groups and aromatic amines. Rosenberg clearly disclosed that the advantages of his invention were not found when such mixtures were used as the curative component that reacts with the polyisocyanate prepolymer. See comparative examples C and H.

However, upon further consideration, a new ground(s) of rejection is made in view of U.S Patent No. 5,340,652 to Sondhe et al. and U.S. Patent No. 5,895,806 to Gajewksi in view of

Claim 22-25, 28-41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S Patent No. 5,340,652 to Sondhe et al. in view of U.S. Patent No. 5,895,806 to Gajewksi.

As to claims 22, 24-25, 28-29, 40-41, and 43, Sondhe discloses an article comprising an epoxy base coat and a urethane top coat (Abstract) that is generally liquid at ambient temperature (Column 9, lines 22-23) wherein the article is generally formed by adding a layer of the urethane composition to the epoxy composition (Column 4, lines 22-25). Sondhe discloses that the urethane system is mixed in any convention manner generally applied under pressure to the top of the previously applied epoxy composition while the epoxy base layer is still tacky and then is finally cured while the epoxy system is still curing (Column 13, lines 29-47). Sondhe further discloses it is desired that the epoxy base layer is not fully cured when the urethane is applied so that a chemical bond will form between the layers. Because of the ingredients of both the epoxy system and the urethane system cure occurs at ambient temperature (Column 13, lines 55-62).

Sondhe discloses a urethane topcoat that can be applied at ambient temperatures to the epoxy base coat, but fails to disclose the urethane topcoat of the presently claimed invention.

Howevever, Gajewski discloses a polyurethane composition that can reacted, mixed, and applied at ambient temperatures and that can be applied to the substrates to be coated without the need for molds (Column 4, lines 60-66) comprising the reaction product of an a) isocyanate-terminated polyurethane prepolymer and b) a curative agent comprising a polyol, an aromatic diamine, and an aliphatic amine (Column 2, lines 5-13). In regards to the limitation of instant claim 22, Gajewski discloses a isocyanate-terminated prepolymer prepared from aromatic polyisocyanates and a mixture of high

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MW and low MW polyols wherein the diisocyanate monomer is used in a ratio of at least 2:1 of polyisocyanate to polyol (Column 2, lines 15-24), thus the prepolymer still contains unreacted diisocyanate monomer and meets limitation (B) of instant claim 22. In regards to limitation (A), Gajewski discloses a curative agent comprising the same polyols used in the preparation of the prepolymer in addition to an aromatic amine component (Column 3, lines 41-60). Gajewski further discloses low molecular weight polyol (Column 3, lines 13-20) such as tetraethylene which is a polyether polyol that has a calculated molecular weight of 194 g/mol and a calculated hydroxyl group concentration of 10.3 mol OH/kg polyol, which falls within the claimed ranges.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to substitute the urethane topcoat of Sondhe for the urethane topcoat of Gajewski because it is prima facie obvious to combine two compositions (urethane topcoats) each of which is taught by the prior art to be useful for the same purpose (as urethane topcoats applied at ambient temperatures, in order to form a third composition to be used for the very same purpose....(synthetic resin composite material). The idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850,205 USPQ 1069, 1072 (CCPA 1980).

Furthermore, from personal work experience, the Gajewski reference discloses polyurethanes suitable for the production of industrial rolls such as paper mill rolls. Industrial sized polyurethane paper mill rolls consist of two layers, a base layer, which is normally an epoxy resin, and a topcoat layer which is normally the polyurethane resin disclosed by Gajewski. A person of ordinary skill in the art would understand that when

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applying the polyurethane topcoat to the epoxy basecoat substantial adhesion between the synthetic coat and the gel coat needs to be adequate in order to avoid catastrophic disasters once the industrial roll is put into place in a paper making facility. Furthermore, appropriate adhesion between the basecoat and topcoat is achieved because the polyurethane coat is in a gel state as it is being applied to the epoxy basecoat, which provides a sufficient lamination time (because of the components in the polyurethane topcoat) that enables the roll to be completely covered before finally curing the entire roll to be shipped for paper making. At the time of the invention, a person of ordinary skill in the art would see the correlation between the two polyurethane topcoats of Rosenberg and the broad instant claims and it would have been obvious to substitute one for the other when applying the topcoat to a synthetic resin such as an epoxy resin.

As to claim 23, Gajewski does not directly disclose that the gel coat at 23°C displays an elongation at break of at least 3%, however, because all of the components are present in the composition it is inherent that the composition would have these properties. If it is the applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' positions; and (2) it would be the Office's position that the application contains inadequate disclosure that there is teaching as to how to obtain a composition with these properties.

As to claims 30-32, Gajewski discloses MCDEA as the aromatic amine used in the polyurethane mixture. As evidenced by paragraphs 60-63 of the Pre-Grant Publication of the instant application, this particular aromatic amine when subjected to

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the limitations found in claim 8 of the instant application inherently gives the desired gel time. If it is the applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' positions; and (2) it would be the Office's position that the application contains inadequate disclosure that there is teaching as to how to obtain a composition with these properties.

As to claims 33-36 and 39, Gajewski discloses in the curative agent the amount of polyol being from 90 to 10 weight percent and the amount of aromatic amine is present in an amount ranging from 10 weight percent to 90 weight percent and that the amount of low molecular weight polyol is from 1 to 20 weight percent (Column 3, lines 10-67, Column 4, lines 1-5).

As to claims 37-38, Gajewski discloses polyether polyols as well as polyester polyols that can be used for the high MW and low MW polyols (Column 3, lines 10-30).

Claims 26-27 and 42 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 5,340,652 to Sondhe et al. in view of U.S. Patent No. 5,895,806 to Gajewski et al. that has been explained above and is applied here as such in view of U.S. Patent No. 3,217,536 to Motsinger et al.

As to claims 26-27, Sondhe and Gajewski teaches the basic process as set forth above. Not disclosed is the synthetic resin contains reinforcing materials. However, Motsinger discloses a polyurethane coating on an epoxy resin laminated with fiberglass (Column 3, line 66, column 4, and line 1). It would have been obvious to a person of ordinary skill in the art to combine the fiberglass laminated epoxy of Motsinger with the

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composition of Gajewski and would have been motivated to do so for such desirable properties as to provide strength and weather protection (Motsinger, Column 4, and lines 1-14).

As to claim 42, Gajewski and Sondhe discloses the basic material as set forth above. Not disclosed is that it is part of a wind vane. However, Motsinger discloses a similar material on a wind vane, in that it measures wind currents (Column 1, lines 50-55). It would have been obvious to a person of ordinary skill in the art to combine the use of Motsinger with the composition of Gajewski and would have been motivated to do so since a wind vane needs to be strong and weather resistant (Motsinger, Column 4, lines 1-14).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LEONARD whose telephone number is (571)270-7450. The examiner can normally be reached on Mon-Fri 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Milton I. Cano/  
Supervisory Patent Examiner, Art Unit 1796

/MICHAEL LEONARD/  
Examiner, Art Unit 1796